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RULEMAKING ESTABLISHING ELECTRIC WEATHERIZATION STANDARDS	**§ § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

CALPINE CORPORATION'S COMMENTS TO PROPOSAL FOR PUBLICATION FOR NEW 16 TAC § 25.55

Calpine Corporation ("Calpine") is headquartered in Houston and has a geographically diverse fleet across 22 states with significant scale in the ERCOT, CAISO, and PJM competitive wholesale markets. Our Texas fleet utilizes combined cycle and cogeneration technologies and supplies approximately 9,000 MW of generation to the ERCOT wholesale market. We take great pride in owning and operating a modern, clean, environmentally efficient, and reliable fleet and seek to be a positive contributor in the communities where our plants are located. We appreciate the opportunity to provide feedback regarding Commission Staff's Proposal for Publication for new 16 Texas Administrative Code ("TAC") § 25.55 to implement weather emergency preparedness measures for generation entities and transmission services providers in the ERCOT power region as required by Senate Bill 3, 87th Legislative Session (Regular Session) ("SB 3"). As these comments are filed on or before September 16, 2021, they are timely submitted.

I. General Comments

As Calpine has previously explained in this docket, weather preparedness is experiential – most improvement is gained from the most severe conditions experienced to date at a particular facility. Calpine's experience in ERCOT and other markets has shown that engineering studies are only modestly effective at determining the performance of a facility and are frequently based on heat trace densities and insulation heat retaining capability. From an engineering perspective, Calpine's approach has been one that includes standardization of best practices for the Calpine

fleet that take into account experience, not simply design basis, of its fleet, combined with the implementation of improvements over time. Mitigating potential points of weakness and learning from past events has proven successful for Calpine's fleet in the past and has prepared it for unpredictable weather events.

II. Comments to Proposal for Publication of new 16 TAC § 25.55

A. Executive Summary

These comments propose the following modifications:

- Section (a) to reflect the commercially sensitive and operational nature of the information provided pursuant to the rule, and recognizing that the information may accordingly be provided confidentially to ERCOT and the Commission;
- Subsection (b)(2) to remove the definition of "energy storage resource" as it is unnecessary;
- Subsection (b)(4) to clarify that the associated facilities included in the definition of "generation resource" are only those that are owned and controlled by the generator;
- Subsection (b)(5) to require ERCOT to consult with stakeholders when developing the inspection criteria;
- Subsection (b)(6) to remove the definition of "resource" as it is unnecessary;
- Subsection (b)(7) to remove the reference to "fuel security" in the definition for "weather emergency preparation measures" as fuel security is more properly addressed in the context of market design and new product offerings, and not weatherization;
- Section (c) to parallel the language used in the heading of section (f) by removing the phrase "Phase One;"

- Subsection (c)(1)(A) to include a good cause exception for certain resources that will be non-operational for the winter season and to limit the required weatherization measures to those that are reasonable and feasible;
- Subsection (c)(1)(B) to narrow the scope of required weatherization measures and to prevent implementation of measures that are detrimental to resource operations;
- Subsection (c)(1)(C) to eliminate "all" and "prevent a recurrence of" as it is not feasible for a generation entity to know the full universe of actions necessary to prevent the possible recurrence of a critical component failure;
- Subsection (c)(1)(D) to include "operations" in the training requirement for winter weather preparations and to limit the requirement to apply to "relevant" operational personnel rather than to all operational personnel;
- Subsection (c)(1)(E) to specify the referenced determination should apply to "experienced" minimum design and operating temperatures and other "experienced" operating limitations;
- Subsection (c)(2) to eliminate the "highest ranking" requirement for a generation entity's representative to submit the required notarized attestation form;
- Subsection (c)(3) to eliminate "subsystems" from inclusion in the comprehensive checklist form as it is unnecessary;
- Subsection (c)(4) to increase ERCOT's deadline to file a summary report of the winter weather readiness reports and a spreadsheet delineating compliance to January 15, 2022;
- Subsection (c)(6) to eliminate "submit a" and "for" from the good cause exception process and to eliminate the "highest ranking" requirement for generation entity's representative to provide the required notarized attestation;

- Subsection (d)(2) to include a dispute process for generation entities if ERCOT identifies an issue of noncompliance in its inspection of resources and to eliminate "reliability risk" from consideration in determining the cure period for an issue of noncompliance;
- Section (e) to remove the use of the term "repeated" as being ambiguous and replace with the more concrete concept of "multiple occurrences of failures in the same season" and to remove the restriction on the qualified professional engineer that can assess a generation entity's weather emergency preparation measures, plans, procedures, and operations as being overly restrictive given the potential number of qualified professional engineering firms that can conduct this analysis, and to update the last sentence in the section to correct a grammatical error; and
- Section (f) to parallel language in the title of section (c).

B. Substantive Comments

1. Section (a)

Weather emergency preparedness is of extreme importance, but also implicates information that is considered confidential by the specific reporting generation entities. The information in the reports referenced in this new 16 TAC § 25.55 include both commercially sensitive and operational data. It is therefore important that the rule recognizes the confidential nature of the information implicated by the rule and provides that such information can be confidentially reported to the Commission and ERCOT. For these reasons the following modification should be made to section (a):

> **(a) Application.** This section applies to the Electric Reliability Council of Texas, Inc. (ERCOT) and to generation entities and transmission service providers in the ERCOT power region. Because the information implicated by this rule includes both commercially sensitive information, information related to critical infrastructure, trade secrets, and sensitive operational data, provided

pursuant to this rule can be provided confidentially to both ERCOT and the commission.

2. Section (b)

i. Subsection (b)(2)

The term "energy storage resource" does not need to be defined separately in this new 16 TAC § 25.55 as these resources are generation entities and are covered by the language related to those assets, including the phrase "registered with ERCOT as a generation resource," the process and requirements of which are described in the ERCOT Nodal Protocols. As there is no need to separately define them in this rule, subsection (b)(2) should be struck and the proceeding items should be renumbered.

ii. Subsection (b)(4)

The definition for "generation resource" should be modified to make clear that the associated facilities only include those facilities that are owned and controlled by the generator. This distinction is important because there are some arrangements that are behind the generator's point of interconnection that require a customer to take steam for the generation resource to produce. The generation resource should not be responsible for plant failures at the customer site that are behind the point of interconnection. Therefore, the following modification is recommended:

(4) **Generation resource** – A generator capable of providing energy or ancillary services to the ERCOT grid and that is registered with ERCOT as a generation resource, as well as associated facilities behind the generator's point of interconnection that are owned and controlled by the generator, and necessary for the operation of the generator.

iii. Subsection (b)(5)

The definition for "inspection" should be amended to require ERCOT to consult with stakeholders, through the stakeholder process or other appropriate public forum to create the

inspection criteria. ERCOT and the Commission could benefit from this additional input as many entities that own or operate a generation fleet in ERCOT also own generation in other markets where similar weather preparedness inspection processes already exist. These stakeholders can bring important lessons learned to ERCOT. Therefore, the following modification is recommended:

> (5) **Inspection** – The activities that ERCOT engages in to determine whether a generation entity is in compliance with subsection (c) of this section or whether a transmission service provider is in compliance with subsection (f) of this section. An inspection may include site visits; assessments of procedures; interviews; and review of information provided by a generation entity or transmission service provider in response to a request by ERCOT, including review of evaluations conducted by the generation entity or transmission service provider or its contractor. ERCOT will determine, in consultation with the commission and stakeholders and through the stakeholder process or other appropriate public forum, the number, extent, and content of inspections and may conduct inspections using both employees and contractors.

iv. Subsection (b)(6)

The term "resource" need not be defined in the rule as it is captured by the definition of "generation entities" and the use of the phrase "registered with ERCOT as a generation resource," the process and requirements of which are described in the ERCOT Nodal Protocols. Therefore, subsection (b)(6) should be struck in the final rule.

v. Subsection (b)(7)

The definition of "weather emergency preparation measures" should be revised to remove "fuel security" from the definition as fuel security is a separate issue from weatherization. Generation entities are limited by the natural gas infrastructure system and the natural gas delivery supply chain as demonstrated by the gas supply cuts faced by many generators under firm fuel contracts during Winter Storm Uri. Fuel security is better addressed in the context of market design

and new product offerings. For these reasons, the definition of "weather emergency preparation measures" should be revised as follows:

> (7) **Weather emergency preparation measures** – Measures that a generation entity or transmission service provider takes to support the function of a facility in extreme weather conditions, including weatherization, ~~fuel security,~~ staffing plans, operational readiness, and structural preparations.

3. Section (c) and (d)

The language in the heading of section (c) should be updated to parallel the language used in section (f). To make the language parallel, the phrase "Phase One" should be removed. The term "Phase One" should also be removed from the section description because the term can be interpreted to imply that this rule is not final and therefore does not fully comply with the statutory deadline for implementation imposed by SB 3.

i. Subsection (c)(1)(A)

Subsection (c)(1) should include a good cause exception to the December 1, 2021 requirement for generation entities to complete the required winter weather emergency preparations for seasonally mothballed resources, or resources in a period of extended outage that will render them non-operational for the season. This exception would prevent generation resources that are not reasonably expected to be online or available during winter months from having to demonstrate compliance with reliability standards applicable to months when they will not be operating.

This subsection should also limit the required weatherization measures to those that are reasonable and feasible. As currently drafted, requiring a generation resource to implement "all" measures to ensure sustained operation during winter weather is overly broad and non-instructive. Owners of generation resources become aware of the measures needed to ensure such sustained operation on an experiential basis. Tailoring the language in this subsection as proposed below

will also track the language of PURA Section 35.0021(b) more closely. Therefore, the following modification is recommended:

> **(c) ~~Phase one~~ Weather emergency preparedness reliability standards for a generation entity.**
>
> (1) By December 1, 2021, a generation entity that is not seasonally mothballed or experiencing a prolonged season-long outage must complete the following winter weather emergency preparations for each resource under its control:
>
> (A) ~~All preparations necessary to ensure~~ Implement measures, where feasible, to prepare generation resources for the sustained operation of all cold weather critical components during winter weather conditions, such as chemicals, auxiliary fuels, and other materials, and personnel required to operate the resource;

ii. Subsection (c)(1)(B)

Implementation of the measures included in this subsection may not be feasible by the December 1, 2021 deadline and additionally are not necessarily appropriate for protection against the extreme winter weather that is typical of the ERCOT region. Texas typically experiences much milder cold temperatures than this equipment would require for adequate generation performance. The below measures may apply to fleets that operate in other areas of the United States as well as certain facilities operating in Texas. However, requiring such specific measures in a one-size fits all approach does not allow for generation resources to evaluate the application to their specific generating resources. Therefore, the following modification is recommended:

> (B) Create an inventory of resources to prepare for extreme cold weather events. Take measures to mitigate extreme cold weather based on the location, age, design and operational experience of the applicable facility; such measures may include, but may not be limited to: ~~i~~Installation of ~~adequate~~ wind breaks for resources susceptible to outages or derates caused by wind~~;~~ and enclosures of sensors for cold weather critical components; inspection of thermal insulation for damage or degradation and repair of any damaged or degraded insulation; confirmation of the operability of instrument

air moisture prevention systems; inspection and maintenance of freeze protection components for ~~all~~ critical equipment~~, including fuel delivery systems, the failure of which could cause an outage or derate, and establishment of a schedule for testing of such freeze protection components on an ongoing monthly basis; and the installation of monitoring systems for cold weather critical components, including circuitry providing freeze protection or preventing instrument air moisture~~. The above examples are illustrative in nature and do not represent explicit or exhaustive measures that must be taken to mitigate extreme cold weather;

iii. Subsection (c)(1)(C)

This subsection is overly broad by requiring undefined "all" actions to be taken to "prevent" a recurring cold weather critical component failure. SB 3 requires this resource weatherization rule to be a preparation standard rather than a performance standard. It is not feasible for a generation resource to guarantee it can prevent a component failure; however, it is feasible for a generation resource to guarantee it will take actions necessary to address a prior failure to reduce the likelihood of reoccurrence. Therefore, the following modification is recommended:

(C) Take ~~All~~ actions necessary to address ~~prevent a reoccurrence of~~ any cold weather critical component failure that occurred in the period between November 30, 2020 and March 1, 2021;

iv. Subsection (c)(1)(D)

Generation resources must have employees who are trained not only in the necessary winter weather preparation standards but also in related operations to ensure reliable performance during a winter weather emergency. Therefore, the following modification to this subsection is recommended:

(D) Provision of training on winter weather preparations and operations to relevant operational personnel; and

v. Subsection (c)(1)(E)

This subsection requires determination of a minimum design and operating temperature for operation during emergency winter weather but does not specify any engineering standard for reference. Accordingly, generation resources should be permitted to indicate that operating limitations are based on their lowest experienced temperatures. Therefore, the following modification to this subsection is recommended:

> (E) Determination of minimum <u>experienced</u> design temperature, minimum <u>experienced</u> operating temperature, and other operating limitations based on <u>experiential</u> temperature, precipitation, humidity, wind speed, and wind direction.

vi. Subsection (c)(2)

This subsection requires generation entities to submit to the Commission and to ERCOT a winter weather readiness report on a form prescribed by ERCOT. However, the form was not published with the draft rule, and stakeholders are therefore unable to comment on the form. Additionally, it requires submission of a notarized attestation sworn to by representatives of a generation entity that may not necessarily be closest to the winter weather preparedness process. It is more likely that an officer with binding authority in operations, for example, would be best suited to make the required attestation. Therefore, the following modification to this subsection is recommended:

> (2) By December 1, 2021, a generation entity must submit to the commission and ERCOT, on a form prescribed by ERCOT and developed in consultation with commission staff, a winter weather readiness report that:
>
> (A) Describes all activities taken by the generation entity to complete the requirements of paragraph (1) of this subsection; and
>
> (B) Includes, a notarized attestation sworn to by <u>a ~~the generation entity's highest ranking~~</u> representative, official, or officer with

binding authority over the generation entity, attesting to the completion of all activities described in paragraph (1) of this subsection and the accuracy and veracity of the information described in subparagraph (2)(A) of this subsection.

vii. Subsection (c)(3)

Requiring a comprehensive checklist form that includes checking "systems" will necessarily encompass any subsystems containing cold weather critical components, where applicable. Accordingly including "subsystems" is duplicative and ambiguous. Therefore, "subsystems" should be omitted from this subsection:

(3) Based on the requirements of paragraph (1) of this subsection, ERCOT must develop a comprehensive checklist form that includes checking systems ~~and subsystems~~ containing cold weather critical components and file it with the commission no later than December 10, 2021. In addition, ERCOT must use a generation entity's winter weather readiness report submitted under paragraph (2) of this subsection to adapt the checklist to the inspections of the generation entity's resources.

viii. Subsection (c)(4)

As generation resources are required to file their winter weather readiness reports by December 1, 2021, it may not be feasible for ERCOT to file a summary of the reports (including a summary of compliance with certain requirements thereof) and a spreadsheet delineating compliance by December 10, 2021. Therefore, the time frame for ERCOT to provide the information required by this subsection should be extended as follows:

(4) No later than ~~December 10, 2021~~January 15, 2022, ERCOT must file with the commission a summary report of the winter weather readiness reports filed under paragraph (2) of this subsection, including a summary of compliance with the requirements of paragraph (1) and (2) of this subsection and a spreadsheet that delineates compliance with the requirements of paragraph (1) of this subsection for all resources subject to those requirements.

ix. Subsection (c)(6)

To simplify the language in this subsection, and to provide consistency with previous recommendations, the following modifications are recommended:

> (6) Good cause exception. A generation entity may ~~submit a~~ request ~~for~~ a good cause exception with the commission to specific requirements listed in paragraph (1) of this subsection.
>
> (A) A generation entity's request must include:
>
> (v) A notarized attestation sworn to by the generation entity's ~~highest ranking representative,~~ official, or officer with binding authority over the generation entity attesting to the accuracy and veracity of the information in the request.

x. Subsection (d)(2)

Subsection (d)(2) indicates that ERCOT must provide an inspection report to a generation entity addressing if a given resource has satisfied the requirements of subsection (c). Additionally, ERCOT must provide the generation entity a reasonable period to cure any issues if it has not complied. However, there is no process described in the proposed rule whereby a generation entity may dispute any ERCOT findings of noncompliance. As these standards are new and likely subject to evolution and interpretation, and as the administrative penalty for violation of these standards can reach $1,000,000, generation entities should be afforded an avenue to dispute findings of noncompliance rather than being required to "cure" an alleged deficiency without question. Therefore, a process to dispute findings of an inspection report should be provided for in the rule.

Additionally, subsection (d)(2) requires that the cure period determined by ERCOT consider the "reliability risk of the resource's noncompliance," but provides no metric by which to make this evaluation. This consideration is purely subjective based on the day and weather conditions considered, what the potential for outage capacity is per resource, what the reserve

capacity may be at the time, and any other number of factors. Because of these concerns, the following modifications are recommended:

> (2) ERCOT inspection report. ERCOT must provide a report on its inspection of a resource to the generation entity. The inspection report must address whether the resource has complied with the requirements in subsection (c) that ERCOT reviewed for the resource and, if the resource has not complied, ERCOT must (1) allow the generation entity to dispute the deficiency and provide a forum for arbitration or appeal of the dispute and (2) provide the generation entity a reasonable period to cure the identified deficiencies. The cure period determined by ERCOT must consider what weather emergency preparation measures the generation entity may be reasonably expected to have taken before ERCOT's inspection~~, the reliability risk of the resource's noncompliance,~~ and the complexity of the measures needed to cure the deficiency.

4. Section (e)

Section (e) should be revised to clarify the meaning of the term "repeated" as used in the first sentence. As written, it is ambiguous how "repeated" is defined as it could mean multiple occurrences in the same season or occurrences in multiple seasons. Given the wide variation in temperatures in a particular season from one year to the next, "repeated" should be clarified to mean multiple occurrences in the same season. In addition, because there will likely only be a limited number of firms that can assess the weather emergency preparation measures, plans, procedures, and operations, it is recommended that the limitation of having performed this service for the generation entity in the past should be removed. Finally, it appears the last sentence in the section appears to be missing a word, therefore, updates are recommended to correct the omission. For these reasons, the following modifications are recommended:

> (e) **Weather-related failures by a generation entity to provide service.** For a generation entity with a resource that experiences ~~repeated or major weather-related forced interruptions of service, including forced outages, derates, or maintenance-related outages~~ multiple occurrences of the same failures in similar conditions over a period of three years, the generation entity must contract with a qualified professional engineer who is not an

employee of the generation entity or its affiliate ~~and who has not participated in previous assessments for the resource~~ to assess its weather emergency preparation measures, plans, procedures, and operations. The generation entity must submit the qualified professional engineer's assessment to the commission and ERCOT. ERCOT must adopt rules that specify the circumstances for which this requirement applies and specify the scope and contents of the assessment. A generation entity to which this subsection applies may be subject to additional inspections by ERCOT. ERCOT must refer to the commission for enforcement of any generation entity that violates this rule and fails to cure the identified deficiencies within a reasonable period of time.

5. Section (f)

Language in section (c) and (f) of the final rule should be parallel. By not being parallel it appears that there is only a phase one for generation entities and not transmission service providers. If recommended revisions to the section (c) heading are not adopted, the heading for section (f) should be modified to track the adopted language in section (c).

Conclusion

Calpine remains committed to emphasizing and improving its weatherization process within ERCOT as required. We appreciate this opportunity to present our views on this very important matter and will remain engaged as this Project develops. We will make available representatives to discuss these positions if helpful to the Commission.

Respectfully submitted,

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